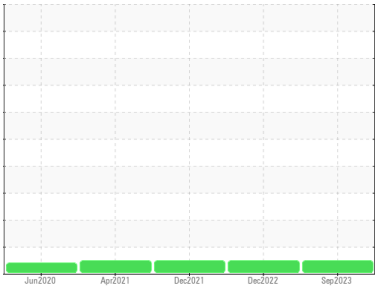
OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
## (T508959) 600HP
Machine Id
## 531089 [600HP]
Component
**Diesel Engine**
Fluid
**MOBIL 1 SAE 10W30 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil.

**Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0101244** | PCA0067762 | PCA0055674 |
| Sample Date | | Client Info | | **06 Sep 2023** | 25 Dec 2022 | 21 Dec 2021 |
| Machine Age | hrs | Client Info | | **35660** | 32558 | 28301 |
| Oil Age | hrs | Client Info | | **3000** | 4000 | 3500 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >100 | **5** | 36 | 37 |
| Chromium | ppm | ASTM D5185m | >20 | **0** | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | **<1** | 4 | 5 |
| Lead | ppm | ASTM D5185m | >40 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | **0** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

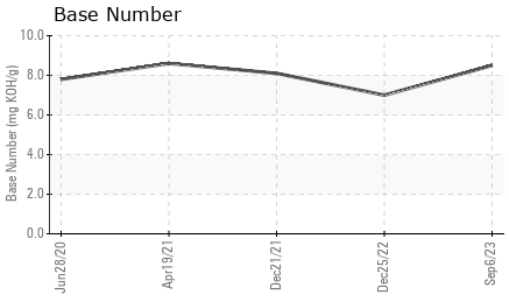
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **2** | 1 | 2 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **59** | 63 | 67 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **946** | 983 | 1044 |
| Calcium | ppm | ASTM D5185m | | **1015** | 1171 | 1173 |
| Phosphorus | ppm | ASTM D5185m | | **1049** | 1011 | 1099 |
| Zinc | ppm | ASTM D5185m | | **1233** | 1323 | 1381 |
| Sulfur | ppm | ASTM D5185m | | **3085** | 3137 | 2588 |

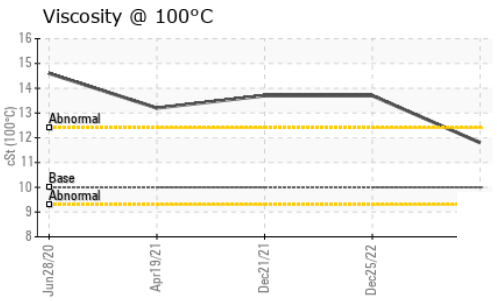
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **3** | 7 | 6 |
| Sodium | ppm | ASTM D5185m | | **1** | 8 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 2 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.2** | 1.4 | 1.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **6.1** | 16.6 | 14.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **18.1** | 29.3 | 27.7 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **14.8** | 32.9 | 30.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **8.5** | 7.0 | 8.1 |

# OIL ANALYSIS REPORT

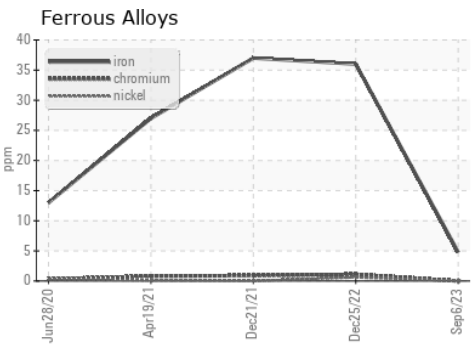


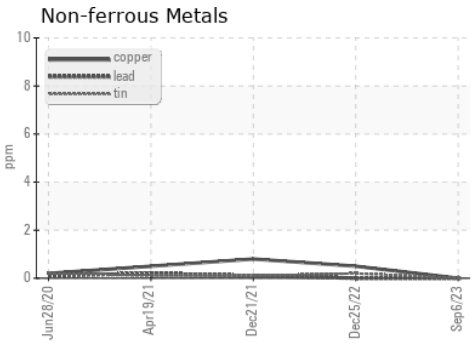



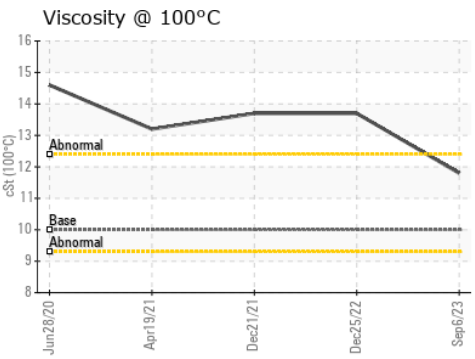

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

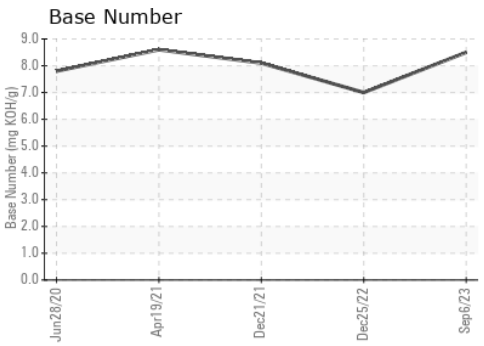
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 10 | **11.8** | 13.7 | 13.7 |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0101244
**Lab Number** : 05965220
**Unique Number** : 10671771
**Test Package** : FLEET

**Received** : 29 Sep 2023
**Diagnosed** : 02 Oct 2023
**Diagnostician** : Don Baldridge

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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